

New York School Journal.

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When compared with the knight of the sword and buckler, the knight of the birch fills but a small space in the pages of fiction. Indeed it would seem from the estimation in which each is held by the novelist, that killing is the more romantic occupation of the two. Nor are the schoolmasters of fiction a very noble or lovable race. Many of them are characterisations of all that is mean, malignant and cruel in human nature. Even the few good schoolmasters portrayed in fiction are more notable for the absence of any very bad qualities than famous for the possession of positive virtues.

In the fictitious writings of Scott, Irving, Dickens, Mulock, Brontë, George Elliot, Edward Eggleston and Dr. Holland, the schoolmaster is brought upon the stage of fiction, but even by these, seldom as a leading character. Indeed, by some of these authors he is only brought in as a sort of a minor villain, apparently not having force of character to play the rôle of leading knave of the story.

One of the most graphic portrayures of a certain type of the genus schoolmaster of fiction, is that of Ichabod Crane in Irving's "Legend of Sleepy Hollow." Irving describes him as a worthy wight, who "tarried" in Sleepy Hollow for the purpose of instructing the children of the vicinity. "The cognomen of Crane was not inapplicable to his person. He was tall but exceedingly lank, with narrow shoulders, long arms and legs, hands that dangled a mile out of his sleeves, feet that might serve for shovels, and his whole frame hung loosely together. To see him striding along the profile of a hill, on a windy day, with his clothes bagging and fluttering about him, one might have mistaken him for the genius of famine descending upon the earth, or some scare-crow sloped from a corn field."

Dickens' schoolmasters are no great honor to the noble profession of teaching. Wackford Squeers of Dotheboy's Hall, "an edu-

Edward Eggleston, in several of his fictional works, has graphically portrayed the schools and school-masters of the back country districts in the Western States thirty or forty years ago.

"Want to be a school-master, do you?" said old Jack Means, the boss trustee of Flat Creek District, to Hartseok. "You? Well, what would you do in Flat Creek District? I'd like to know? Why the boys have driv off the last two masters and licked the one afore them like blazes. You might teach school when nothin' but children come. But I 'low it takes a right smart man to be a school-master in Flat Creek in winter. They'd pitch you out of doors, sonny, neck and heels, afore Christmas. Hows'umdever, if you think you kin trust your hide in Flat Creek school-house I haint got no objections. But if you get licked, don't come to us. Flat Creek don't pay no insurance on school-masters, but you bet. Walk into the house; you will hev to board round, and I reckon you might as well begin with me."

There are other school-masters in fiction as worthy of mention as these I have presented; but time and space forbid their introduction. There is one other that I cannot pass by without brief mention, and that is Mr. Bird, of the Bird's Nest, in Dr. Holland's "Arthur Bonycastle." Mr. Bird's methods of teaching, his mode of government, and his noble character are well worthy of study by every teacher.

And now, at the conclusion, some readers of this article may ask, Well, what has all this to do with teaching? Cultivate the amenities of life. Be a man or a woman. *Pacific School and Home Journal.*

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New York, June 19, 1880.

Those who get sample copies will please read "A Few Words."

The State Teachers' Association meets at Canandaigua July 20.

Removal.

The office of the N. Y. SCHOOL JOURNAL, THE TEACHERS' INSTITUTE and the SCHOLAR'S COMPANION, has been removed to No. 28 E. 14th street. All communications should be addressed to us there. And there we shall be happy to welcome our friends and the friends of education.

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James A. Garfield.

Mr. Garfield was born Nov. 19, 1831, in Orange, Cuyahoga County, Ohio. His father died when he was but two years old, and his boyhood and early manhood was a hard to hand struggle with poverty as he fought for an education. Like Lincoln, he was in his boyhood employed as a canal driver and wood-chopper. But the instinct for an education was strong within him, and an attack of ague having interrupted his canal life, he decided to go to Geauga Academy, in an adjoining county. Starting with but \$17 in money, he worked his own way through the academy at Hiram, Portage Co., Ohio, and at the age of twenty-three entered the Junior Class of Williams College, and graduated in 1856 with the metaphysical honors.

After his graduation he was called to teach Latin and Greek in the Classical Academy at Hiram, and one year later was made president of that institution. While connected with this college Mr. Garfield married Miss Lucretia Rudolph, daughter of a worthy citizen in the neighborhood, and much of the statesman's success, as of many a great man, is due to the fact he has a sympathizing wife and happy home circle.

In 1859 Mr. Garfield was elected to the State Senate, but when the war broke out he was appointed Colonel of the Forty-Second Ohio, and went to the front in Eastern Kentucky. His army record is one to be proud of; his defeat of the rebels under Humphrey Marshall, and his services at Pittsburgh Landing, the siege of Corinth, in the operations along the Memphis and Charleston Railroad, and as Chief of Staff of the Army of the Cumberland, having rapidly raised him to the rank of Major General, to which he was promoted for gallantry at Chickamauga. In 1862 he was nominated to Congress, and accepted because he supposed, in common with the whole country, that the war would be over before he would be called to take his seat. He was elected and felt constrained to take his seat, although his personal preferences were to remain with the army. Mr. Garfield's Congressional record is well known. As chairman of the House committee of military affairs, and of the appropriation committee, and later as the leader of the Republicans in the House, his abilities have been recognized by men of both parties, and when he was chosen last fall to succeed Mr. Thurman, as United States Senator, no one was surprised. His abilities and character entitled him to the honor. It is the unanimous feeling of the Republican party that he can be elected President.

The policy of free schools is now so thoroughly established in our State that I do not suppose any one will think of trying to disturb it. But as each of these large figures of expense come to us and we remember how burdensome is taxation, we are apt to ask ourselves what is the good of all this? What advantage does the State derive from all this expenditure? Might not the whole, or at any rate some part be omitted? These questions come to us all. May it not be worth while for a few moments to consider the other side? And in all this I shall only go over facts been published, and with which many of you are familiar. Lord Bacon has in gorgeous language forcibly illustrated that learned States have been usually prosperous States, and that an instructed people has been, for the most part,

a rich, laborious, energetic and powerful people. It is not for us to indulge in his style of lofty grandeur. With us the question is not one of sentiment. It is the sordid question of dollars and cents.

It needs no argument to us here in Connecticut, with our hard and rocky soil, our and inhospitable shore, and our forbidding sky, to convince us that we must depend upon our industries of the earth, or of the mechanic's arts. There is nothing for us but labor in some of its many forms—severe, never-ending labor—*labor omnia vincens*. Is there anything else for us? Is it not by this kind of labor alone that we can hope to prosper? Are we not almost compelled to say that it is by this labor alone that we are to exist? There can be but one answer. If then there is any way by which labor can be made more profitable, any way by which we can get more of it, or a better quality, any way by which labor can be made more useful to the citizen or to the State, is it not plainly our duty to use every endeavor to find it?

In one of the reports made to the Board of Education in Massachusetts some years ago, the Secretary—Mr. Horace Mann—showed by precise statistical details, collected from the superintendents of manufacturing establishments, "that throughout the whole range of mechanical industry the well-educated operative did more work; did it better, wasted less used his allotted portion of machinery to more advantage and more profit, earned more money, commanded more confidence, rose faster, rose higher, from lower to the more advanced positions of the employment than did the uneducated operative." I am confident that every farmer who employs labor can testify to a similar rule among farm laborers. In the report made to the Board of Education in Connecticut, for the year 1870, the Secretary develops this line of thought to considerable extent. In the summing up he says: "It proves that education is economy, and that ignorance means waste: that the skilled workman so forecasts and plans his work that every blow tells, while he economizes both his strength and his stock; that even in the humblest labor he will do more work, in better style, with less damage to tools and machinery than the boor who can only use brute muscle."

This kind of evidence might be extended much further. Does it not certainly show that the best instrumentality for guiding and helping labor and the laborer, and making it more profitable, is to give him the highest practicable degree of mental culture and useful knowledge? Is it not then obviously our duty as well as the best industrial policy to promote, diffuse and perfect it?

Let me read you a brief extract from the most brilliant of New England orators.

"There is not an occupation of civilized life from the making of laws, and 'poems, and histories,' down to the opening of New Jersey oysters with a broken jack-knife, that is not better done by a bright than a dull man, by a quick than a slow mind, by an instructed more than by a gross or simple man, by a prudent, thoughtful and careful man than by a light and foolish one. Every one of these occupations—in other words, the universal labor of civilization—involves, demands, is, a mental effort putting forth a physical effort, and you do but go to the fountain head, as you ought to do, when you seek by an improved culture and better knowledge, to give force and power to the imperial capacity behind, and to set a thoughtful and prudent spirit to guide it.

"You say that you bestow a new power on man when you give him an improved machine. Do you not bestow a more available gift when you bestow on him an improvement of that mental and moral culture which makes, improves and uses all machinery? In the one case you give him a limited amount of coined money, in the other a mine of gold or silver.

"Such is the additional power you give to labor by improving the intellectual and prudential character which informs and guides it."

I wish to add also another quotation. "Remember that the learning of the few is despotism; the learning of the multitude is liberty; and that intelligent and principled liberty is fame, wisdom and power."—Gov. Andrews, of Conn.

THE SCHOOL-ROOM.

For the NEW YORK SCHOOL JOURNAL.

The Primary Class.

By Supt. W. S. HALL.

NUMBERS.

"Teaching always proceeds learning." The child never learned the names of objects until nature, that prince of teachers, taught him. To set before the pupil a stated task to learn without any instruction whatever is unphilosophical to least; this is just what some teachers (?) are doing to-day. The truth is first presented by the living subject. The teachers should live the truth, should act the truth, should speak the truth. Unconsciously we fail in the last. Our words are either too weak or too strong, they either do not tell the whole truth or tell more than the whole. In all instruction truthfulness should be aimed at. Concise language almost always has this element. Before the study of text is taken up oral instruction should be given. This should include the main topics discussed in the text-books. This ought to be the lever where-by mind is pried open. The instruction should "develop the idea." This done the name or "term" comes as a matter of necessity. Ideas always are pre-existent to words. These are but signs or pictures. This instruction should also include the *how* of study. Not that the teacher should always give the pupil all the difficulties in the way of his advancement. But rather such as shall awaken thought and a desire to discover new fields for himself.

Thomas Hill says: "A child should not be expected or required to reason at an early age. Any direct training of the logical powers before the age of twelve years is premature, and, in most cases, a positive injury to the pupil. The common sense view would give facts before reasoning. Reasoning upon facts is the work of mature minds." If this be true, numbers or arithmetic is not unfrequently taught back wards, beginning with reason, ending with observation. An appeal directly to the reasoning faculties in the early stages of this subject is to be prohibited.

Much of the memorizing in schools is to be thoroughly shunned. Prof. Johannot gives an anecdote relative to this kind of memorizing. A little girl of eleven years came home late one day saying she had been detained because she was unable to recite her "geography" lesson. But one word had been missed. She soon learned it and was dismissed. Living just across the street, fresh from her recitation yet she had missed. "This was the sentence the class was obliged to repeat; 'The Danubian provinces of Servia, Moldavia, and Wallachia are nominally independent of the Sublime Porte.' To merely commit such a lesson is sheer nonsense. But it is no more nonsensical or 'unphilosophical' than requiring a child to commit to memory a lot of rules, definitions and processes.

Prof. Johannot says there are three memories, "arbitrary, suggestion and association." Much of the memory exercised is the first. The subject matter is learned to-day, forgotten to-morrow. The words only are attempted to be taught. No ideas are thought of.

If pupils thoroughly comprehend the principles, they can themselves give the rules. So too, can they give or frame a description of the idea, and the processes. If the rules, definitions and processes are to be memorized at all, call to their aid something suggestive or associate the facts together. It will be easier, surer, hence more satisfying this way than merely retaining the doubtful element, arbitrary memory. That which the pupil has found out for himself, or done for himself, will make the most lasting impression.

Things to be guard against in Teaching Primary Nos.

1. Text-book study before oral teaching.
2. An appeal to the Reasoning Faculties.
3. Rules, definitions and processes committed to memory.

In the manufacture of ornamental chains the Roman or Greek jewellers displayed great skill. There was one kind of chain, in particular, wrought with such consummate skill, that modern jewellers have in vain attempted to make it. The links are so cunningly shaped and knit together, that when the chain is extended it resembles a plain bar of gold, and yet it is perfectly flexible in all directions. Chains of this sort, manufactured of gold and silver, have been found in the ruins of Pompeii, after being buried nearly 2,000 years.

Reading-Hour in a Providence School.

The writer had the pleasure of being present, a short time ago, at one of the grammar schools of Providence, during the weekly "reading-hour." The exercise had special reference to the topic in United States history lately taken up, and also, following soon after a short vacation, was made to indicate the books read during vacation; thus taking, of course, a much more general turn. The historical topic was the War of Independence, and the pupils were asked to mention incidents not found in the text book, connected with the siege of Boston. A picturesque incident was immediately volunteered, which proved to have been found in the "Familiar Letters of John and Abigail Adams." Another furnished an incident concerning Franklin in the Continental Congress. From this point the questions became more specially such as related to Franklin, and some seven or eight different pupils contributed incidents in his life and career, which had been gathered from a variety of sources. One pupil told the story of his furnishing an article anonymously to his brother's newspaper. Another related his efforts at securing the French alliance. Traits of his character were mentioned, and one pupil said she thought his independence of character was a good deal owing to the fact that he was the youngest of a large family of children, and was therefore obliged to look after himself. The exercise, in passing to the books read in vacation, became even more interesting. More than a dozen pupils participated, and many more were ready to do so had time permitted. Among the books thus read were Dickens' "Child's History of England," Towle's "Pizarro," Donald Mitchell's "About Old Story Tellers," Kane's "Arctic Explorations," Mrs. Dodge's "Hans Brinker," and Sir Walter Scott's "Lady of the Lake." Each pupil not merely stated that he had read the book, but proceeded to give, in his own language, the principal ideas of the work, as they had impressed him. It is the vivid, picturesque, salient features of a work which impress themselves on a child's mind.

One little girl had been reading the chapters on Iceland, in Mr. Nordhoff's "Stories of the Island World," which she had found very interesting. She told how Iceland had been originally settled by pirates from Norway, and pirates, she said, could not have been looked upon with the same feeling that we now have, "for they all seemed to be pirates in Norway." She told the story of Flobi's ravens, and mentioned that the people of Iceland were extremely hospitable, and that nearly every child knew his letters. The pupil who had read Dickens' "Child's History of England" gave an intelligent account of the period of the Britons and Saxons, showing, however, as in the other case, a marked (and, of course) entirely natural preference for the picturesque incidents, like the scythed chariots of the Britons, and the visit of King Alfred, while in disguise as a minstrel, to the Danish camp. Another told the story of Pizarro, with a keen appreciation of the dramatic and picturesque features of his career. From time to time, the narrative, as told by one pupil, could be supplemented by another who considered an interesting item too important to be left out. The one solitary instance in which a pupil had no clear conception of the time and place of the event was improved by the teacher to point out the necessity of fixing and locating each event, so as to think of it in its historical relations.

The pupil who had been reading "About Old Story Tellers" told the story of Koster and Gutenberg, and of their experiments with movable types, with an intelligent, though thoroughly natural and childlike statement of the conflicting evidence. This was supplemented by another pupil with an incident about Koster, which she said she found in "Hans Brinker;" and by another, with an incident connected with Caxton. Another had been reading Scott's "Lady of the Lake," and mentioned its descriptions of Scotch scenery. The question who Scott was, and what other works he wrote, brought a large number of responses. Still another pupil had read Miss Buckley's "Fairland of Science," and told how much she had been interested in its account of the way in which the coal beds are formed. An exercise like this shows what kind of incidents lay hold of the notice and interest of the child, and that it is possible, by furnishing the right kind of books, to start young readers on a profitable line of reading. It was very evident that these books had been read carefully and understandingly, and the pupils, in consequence, could give a clear account of what they had carried away with them. —This is an exercise which deserves to be more widely adopted in school. —N. E. Journal of Education.

A Telling Teacher.

The most advanced class in arithmetic was called to the board. The teacher read to them: "A cistern holding 250 gallons can be emptied by one pipe in five hours, by another in eight hours; in what time can both pipes, acting together, empty it?" The problem was read in an easy manner to the class, which solved it no less readily. Mary was designated to explain it. Failing to give the first step, the teacher immediately said: "Mary, if one pipe will empty it in five hours, it will empty one-fifth of it in one hour, won't it?" "and one fifth—of 250 is 50," quickly added the pupil. But she could not proceed, and the ever kind and helpful teacher came to her assistance. "Why, Mary, if the second pipe can empty the cistern in eight hours, in one hour—" "it can empty one-eighth of it," said the pupil, "and one-eighth of 250 equals 31 1/4." "Yes. I thought you knew that; go on," answered the teacher. "And the sum of fifty and thirty-one and one-fourth is eighty-one and one-fourth." About to commence again, I interposed: "But why do you add them?" No reply was given; no hand was raised to explain it; but when the obstacle seemed the most insurmountable, resting like a leaden weight upon every heart, the gallant and faithful teacher rallied: "Why, you know, if one pipe empties fifty gallons in one hour and the other thirty-one and one-fourth gallons in the same time, then both together—" "will empty eighty-one and one-fourth gallons," the pupil added quickly, "and eighty-one and one-fourth contained in 250, three and one-thirteenth times." "Well," said the teacher, "if both pipes empty eighty-one and one-fourth gallons in one hour, it will take as many hours"—when the pupils broke in with a dash of victory—"to empty 250 gallons, as eighty-one and one-fourth is contained in 250, or three and one-thirteenth times."

Such teaching may be witnessed still in a large number of schools throughout the country. In that school-room sit the children of proud and loving parents, it may be, who confidently place their mental discipline and improvement in the hands of a person who, however tender and faithful she may be, however well she may understand the text-book, is as incapable to fill her position as to superintend a United States mint. She has not yet learned that teaching is more nearly allied to the Sciences than to the Arts. Teaching is a science most difficult to master; it is an art having more phases than there are shades of color; it is a noble calling in whose ranks are found the names of many who were never called. The teacher leaves the school-room with the generous criticisms that she has failed to reach their understanding; she has failed to improve them; she has failed to have them repeat the analysis; she has failed to make them apply the analysis to other problems; she has failed to impart to them self-reliance; she has failed to arouse a spirit of criticism; she has failed to arouse an act of judgment; she has failed to qualify them for an attack upon either a similar problem or one altogether unlike it, she has failed in that kind of direction which inspires the pupil to advance determinedly against difficulty at last to achieve the proud distinction of having made a conquest, causing him to feel the inspiration of a fresh breath and to look around for more worlds to conquer. Were that school properly supervised that teacher—no, that teller—would not remain in the school-room another hour. There is not seen even the merit of cramming her pupils who, weakened by the want of intellectual labor which constitutes its sole pabulum, rejoiced at having "gone through" the text-book, and stultified by the notion that a great improvement has been made, go forth into the world, pretentious in manner, but wholly unprepared to grapple with its problems.

I was asked to propose an example for the class. It was as follows: "I can mow one-fourth of an acre of grass in three days; John can mow half an acre in five days; how long will it require both of us, working together, to mow one acre?" An unsuccessful attempt at solution was made, but in the hour of dire extremity the teller came to their aid as before, apparently satisfied if she could hear an occasional yes, or induce them to finish a sentence nearly completed by himself. —American Journal of Education.

A country newspaper out west thus heads its report of a fire: "Feast of the Fire Fiend—The forked tongued demon licks with its lurid breath a lumber pile!—Are the scenes of Boston to be repeated?—Loss \$150."

The Normal College.

The annual examination was completed June 14. The following questions were given.

SPELLING. TIME THIRTY MINUTES.

Before Darius sets out from Babylon the whole forces of the Empire had been summoned, but he had not thought it worth while to wait for what he deemed a merely useless encumbrance and the more distant levies, which comprised some of the best troops of the Empire, were still hastening toward Babylon. In a short time, therefore, he would be at the head of a still more numerous host than that which had fought at Issus, yet he thought it safer to open negotiations with Alexander than to trust to the chance of arms.

Accordion, biennial, charade, decalogue, epidemic, forfeited, giraffe, heliotrope, illicit, judiciary, knapsack, lapidary, marsupial, Nemesis, odorous, periphery, querulous, relishing, secession, truncheon, ubiquity, vitriol, was-sail, yeoman, zephyr, Algiers, Barbados, Dubuque, Elsinore, Formosa.

GRAMMAR. NINETY MINUTES.

1. Define the following:—(a) Passive verb, mood, tense, (b) Abstract noun, proper noun, (c) Relative pronoun, personal pronoun, (d) Demonstrative adjective, distributive adjective, (e) Voice.

2. Construct a declarative sentence, an interrogative sentence and an exclamatory sentence, the first complex, the second compound and the third simple. With Columbus for a subject constructed a compound sentence with three co-ordinate clauses.

3. Correct the following sentences and give the reasons:—(a) When do men say that I am. (b) There were a large number of soldiers killed. (c) The man could neither read or write. (d) That is either a man or a woman's voice. (e) Such expressions sound harshly.

4. Analyze:—"Go where glory waits thee,
But when fame elates thee,
Oh! still remember me."

5. Parse:—Go, thee (in the first line), where, still and remember.

ARITHMETIC. NINETY MINUTES.

1. Define number, fraction, proportion and evolution.

2. What will it cost to floor a room 17½ feet long and 16 feet wide, at the rate of \$1.10 per square yard?

3. A man has a capital of \$12,500; he puts 15 per cent of it in stocks, 3½ per cent in land and 25 per cent in mortgages; how many dollars has he left?

4. A grocer bought 500 bags of coffee, each bag containing 49½ pounds, at 12 cents a pound, and sold at a profit of 16½ per cent; for what did he sell it?

5. If I buy a house for \$5,620 and receive \$1,803 for rent in 2 years, 3 months and 15 days, what rate of interest do I get for my money?

6. Find the face of a note payable in ninety days at seven per cent, so that the proceeds shall be \$2,050.

7. A merchant owes \$2,400, of which \$400 is payable in six months, \$800 in ten months and \$1,200 in sixteen months—what is the equated time?

8. If it costs \$7.20 to transport 18½ cwt. 5½ miles, what will it cost to transport 112½ tons 62½ miles?

9. Extract the square root of 1,051 to three places of decimals.

10. What is the cube root of 403, 588, 419?

ALGEBRA. NINETY MINUTES.

1. Define similar terms, exponent, the reciprocal of a quantity, the degree of a term; and state what axioms are employed in the solution of an equation.

2. When $a=2$, $b=3$, $c=4$ and $x=5$, find the value of $7(x^2-c)+6(c^2-b)-5(b^2-a^2)-cx$.

3. Reduce $\frac{x^2+2ax-a^2}{x^2+2ax-a^2}$ to its lowest terms.

4. Find the sum of $\frac{x-y}{xy}$, $\frac{y-z}{yz}$ and $\frac{x-z}{xz}$.

5. Divide $1 + \frac{1}{x}$ by $1 - \frac{1}{x}$.

6. Give $\frac{3}{x+4} - \frac{4}{x-3} = \frac{3}{x+4} + \frac{3}{x-3}$ to find x .

7. Given $\begin{cases} x + 4y = 6 \\ 3x + 5y = 6 \end{cases}$ to find x and y .

8. A said to B. "Give me \$200 and I shall have three times as much as you; but B replied, "Give me \$200 and I shall have twice as much as you." How much money had each?

9. Given $\begin{cases} 2x + 3y - z = 27 \\ 3x - 4y + 3z = 12 \\ 4x + 2y - 5z = 15 \end{cases}$ to find x , y and z .

10. A bin contains 47 bushels of wheat, rye and oats; there are 7 bushels less of oats than of wheat and rye and 17 bushels less of rye than of wheat and oats; required the quantity of each.

UNITED STATES HISTORY.

1. What three European nations took a leading part in discovering, exploring and colonizing the American continent? What portions of the continent were settled by them? And name the principal discoverers who sailed under the flag of each nation.

2. What was the first permanent English settlement? Who was the governor and who the leading man? What was the second English settlement? Give the dates of both.

3. Give the date of King William's war, its cause and the treaty that terminated it.

4. State the cause of the French and Indian war. Give a brief account of Braddock's defeat and of Wolfe's success.

5. Give the events of 1775 in their order.

6. When were the British driven out of Boston? Who was the American commander? Give a brief account of the battle of Long Island.

7. What battles did General Green fight in the South? In which was he defeated? To what place did Cornwallis retreat?

8. What was the most important battle of the war of 1812-15? Name three important naval actions during the war.

9. State the causes of the Mexican war. What benefit did the United States derive from it? Who were the respective commanders at the battle of Buena Vista and who was victorious?

10. What were the causes of the war of the rebellion? Describe McClellan's campaign against Richmond. Who were President and Vice President of the Confederacy? Who utterly routed the rebels at Nashville? Give the date and place of Lee's surrender.

GEOGRAPHY.

1. Name the three branches of geography, and state the province of each.

2. Define equator, latitude, longitude, meridian. If it is twelve o'clock at New York, what o'clock is it at St. Petersburg, the former being 74 degrees west, and the latter 30 degrees east longitude?

3. Name three of the causes that determine climate.

4. Bound Pennsylvania and California and write the capital of each.

5. Bound France and Italy and write the capital of each.

6. Name the countries bounded on the north by the Mediterranean. Bound Egypt and write the names of the two most important cities.

7. Name the principal rivers of Siberia, China and Hindoostan; also the seas in the east of Asia.

8. State accurately the position of the following cities:—Calcutta, Rio Janeiro, Callao, Chicago, St. Louis, Vienna, Havre, Washington, Buffalo, and Hartford.

9. Name six principal rivers of the United States in the order of their length.

10. Name five important mountain ranges in Europe.

DRAWING. SIXTY MINUTES.

1. Draw free hand any three of the following figures:—(a) An equilateral triangle (side 6 inches). (b) Two concentric squares (side of one 4 inches). (c) A regular hexagon (side 3 inches). (d) An ellipse (the longer diameter 6 inches and the shorter 4 inches). (e) Some historic figure. (f) Conventionalize some plant.

2. Draw in perspective from the model one of the following solids:—(a) A cube. (b) A four-sided prism. (c) A hexagonal prism. (d) A pyramid. (e) A vase.

Annie H. White, of Grammar School No. 48, and Florence Kupper, of the same institution—reached 99%. The total number admitted was 807.

PLEASE give your opinion as to an analysis of the following:—"All that a man hath will he give for his life." The main idea is that of giving; this is modified as to what is given, and for what. Hence the main sentence is, "He will give." The other part of the complex sentence is a sentence used as the object of the main sentence—this object is "all that a man hath."

EDUCATIONAL NOTES.

NEW YORK CITY.

The Board of Education met June 9. The Committee on Buildings made a report in respect to repairs:

The new system of requiring the Trustees to let the repairs by contract and to state on blanks just what repairs were needed was set forth.

It stated the average annual cost of keeping a school-house in repair amount from \$334 to \$1,388.

The report was ordered to be printed and to be made, a the special order at the next meeting.

The report on Evening Schools was adopted adding G. S. 29, 15 and 62 to the list as heretofore published.

At the meeting on the 16th the Trustees Committee reported to fine G. N. Mead, G. S. 46, five days pay, for inflicting corporal punishment. The Mayor appointed Hubbard G. Stone a Commissioner in place of J. W. Mason. He is a jeweler and watchmaker and has been a ward trustee. The Building Committee's report was passed, Mr. Watson making a long and able speech in reference to it.

THE CITY COLLEGE.—The annual examination of the boys in the public schools who made application to enter the City College was finished about June 11. About nine hundred and twenty-three were examined. Out of the 923 who asked admission 453 were admitted. Levi Harrison, of G. S. 55, reached ninety-three marks.

GRAMMAR SCHOOL No. 28.—On the 11th the graduating exercises took place. The room was decorated with vines and flowers. Large floral balls, with ferns and grasses, were suspended from the ceiling by vine-wound cords. Evergreens were in the windows, and there were ornaments of ferns. There were 18 graduates. Upon the platform were Commissioners Manierre, Walker and Stone, Professor Scott, Inspectors Perkins and Agnew, Superintendent Jones, and Trustees Tietjen, Maher and Littlefield.

Miss Ida L. Patterson pronounced an appropriate salutatory, and then singing and recitation followed. The singing was remarkably fine. Mr. Charles J. Nehrbas distributed the prizes to Misses Ella Fletcher, Amelia Keller and Ida Patterson.

In response to a call published in the JOURNAL of last week, a number of graduates met in our office and organized "The New York Alumni Association of the Albany Normal School," by electing Amos M. Kellogg, president; Dr. Benjamin Edson, of Brooklyn, vice-president; Hannibal Robinson, treasurer, and Edward H. Hallock secretary for the ensuing year. The meeting was very interesting. It was a cordial reunion, and many old associations were delightfully revived. It is desired that all graduates living in this vicinity send their address to this office as soon as convenient, that a larger meeting may soon be held.

ELSEWHERE.

TENNESSEE.—Hon. Leon Trousdale, State Superintendent of Public Instruction, is engaged in holding a number of institutes throughout the State. He held a teachers' institute at Taylorsville, Johnson county, commencing on Wednesday, June 16, and continuing until Friday evening. Some of our county superintendents have held successful county institutes. Our teachers are striving to improve themselves in methods, etc., and thereby elevate the professional standard of instruction, by attending normal schools, institutes, and reading educational journals. Your TEACHERS' INSTITUTE and The Normal Teacher ought to be extensively circulated in Tennessee.

The Brooklyn Excursion.

On Saturday last, the teachers of Brooklyn, on the chartered steamer "Morrissania" went around Staten Island, visited Fort Wadsworth and pic-nicked in Mr. Appleton's park. The sail was delightful—only the boat was rather small for the large number who went, and there was a scarcity of chairs. Principals Jelliffe, Higgins, Tuttle, Patterson, Woodworth, Bush and others were present; Messrs. Murphy and Huntley of the Board of Education, also Superintendent Field. The steamboat was somewhat delayed at Jewell's wharf by two other excursion boats; but at half-past nine it started off. Past Governor's Island and then the breeze from the ocean was felt. At "Sailor's Snug Harbor" a company of the wide-awake Staten Island teachers was taken on board, Principals McDonald, Sprague and many others. Arriving at the Fort, nearly all visited the warlike structure; then on through the dust to the Appleton Park.

At this spot, an immediate attack was made on the lunch baskets. The representatives of the publishing-houses were gathered under a tree; there seemed to be an undefined expectation that the Messrs. Appleton would, in order to further their interests, distribute unlimited

amounts of ice cream—but such was not the case. Even the genial Brown and the indefatigable Hayes were absent. This disappointment seemed to cast a gloomy shadow over a certain portion of the company. It was dispelled, however, by the silvery tongues of Dr. King, Erastus Brooks and George William Curtis.

These gentlemen stood on a platform which had been previously occupied by those who could "trip the light fantastic toe." Dr. King, Commissioner of Richmond Co., in a graceful speech introduced Mr. Brooks, who made a short solid speech, glorifying the teacher's cause—of course it took well. Mr. Curtis, in his *always* pleasing style, gave a historical sketch of Staten Island. Who can analyze the method of a great mind? The facts were not wonderful—but the presentation was truly wonderful. Every one said, "How delightful!" Mr. Curtis looks a man of culture, a gentleman of refinement and sensibility. We remember when first he enchained us with, "My possessions in Spain."

The speech over, the signal for retiring was given. It cannot be said the occasion was to advance education—but the educators. By careful inquiries, a good deal of information was elicited. The Brooklyn teachers are not pleased with the operation of the Central Grammar School, and in fact it may be questioned whether the patrons are. Either the management is defective, or its plan is a poor one. "Few of my pupils stay," said one principal. "They come back and say they would prefer to be at school in No. —," said another. The immense preponderance of the females is a remarkable feature—three-fourths are of that sex.

A Brooklyn Commissioner of Education gave utterance to his views on education: "I don't believe in all this bosh about high schools. Good instruction in the elements is enough. And normal schools! You might as well have schools for artists and poets. I can tell a teacher without difficulty. How? Why, a girl called on me when I was not able to sit up. I just said to her what is the difference between discount and interest?" and she burst out crying. She knew all about algebra, but she could not tell that. That's not sufficient a test? Well, I thought so. Then I wouldn't give a snap for one who could not condense his thoughts and make his statements short and clear. No, it don't take long to find out whether a person can teach. Why, one lady came to me and said she wanted I should question her. Well, I was busy then and appointed another time, and she came and said she wanted her examination. That showed she would make a teacher.

Good teachers have come from the normal schools? Then it was because they were such before they went there. No, they don't need to know anything about the history or principles of education. I tell you the first school I ever taught was the best one. Would I go to a lawyer who had tried difficult cases if I wanted to get out of difficulty? No, I would get any level headed young fellow; he would do just as well as a doctor who knew about eyes to fix mine? No, sir, it is all humbug; one is about as good as another. But it is different in teaching anyhow. A man don't need experience; all he needs is to know the mind of a child—then he can teach. How will he know his mind? Why, he will know it by intuition, right off!"

Prof. L. thinks there should be a monthly educational magazine, in which reviews of all the books published in the German and French languages should be found. He believes that two hundred of the Brooklyn teachers would grasp it more eagerly than children do candy. It is wonderful how the specter of a model educational paper floats before the minds of many very earnest teachers. If Prof. L. would only get up this magazine and try it on the teachers he will learn things he has never dreamed of. It would be safer for him to act as a sewing machine agent than as canvasser for that magazine. Why? The words of Brooklyn's Commissioner show the exact reason. Persons are appointed as teachers who know *nothing* of education. If all the other commissioners hold the semi-civilized views of this one the cause of Brooklyn's deadness is apparent. Instead of two hundred copies of such a magazine being taken in Brooklyn, only one could be floated, and that by Prof. L.

There are thousands of school officers like this one. Good, sound men, who know nothing of education are set to select the principals and assistants of schools in most of our cities. If any other business was run in this way, it would be run into the ground in thirty days. The schools do not, because there is a public to be taxed to keep them up. The only way to run the schools of Brooklyn is on the plan of the Polytechnic Institute. Prof. Cochran selects his own men, and he is held responsible.

EDUCATIONAL MISCELLANY.

For the NEW YORK SCHOOL JOURNAL.

The Influence of Meteors on Light.

By LAWRENCE SLUTER BENSON.

There is a point which has never been considered by physicists in their experiments with the spectroscopic phenomena. For several centuries before the Christian era and to the present we have been made aware of the fall of meteoric stones on various parts of the earth; this singular phenomenon, together with its frequent occurrence, has given rise to all manner of speculations. Chemical analyses of these stones betray ordinary earthly substances variously combined, with iron and carbon greatly in excess. This fact should make it evident that originally they rose from the earth; but astronomers and physicists endeavor to prove them of *re-otter* origin, imagining that they have been hurled from distant cosmical bodies, or find their way into space through internal convulsions of these bodies, and their disintegrations. Hence, they consider that multitudes of these meteors, not having overcome their primitive impulse of motion, wander through space outside their proper courses, and that when they are found to have fallen to the earth's surface, it is because they cross the earth's orbit, and get under the earth's influence. Some philosophers, like Sir William Thomson, Prof. Helmholtz and others, suppose that these meteoric stones convey germs and seed, and thus account for the earth being stocked with animals and plants.

The fact that analyses reveal strictly telluric substances in all these meteors is sufficient evidence that they, at some previous time, formed a part of the earth. The question then looms up—how did such weighty masses attain elevated positions in the atmosphere?

We are all acquainted with the phenomena of rain, snow and hail; we know that they are the same in nature with the great body of the ocean, rivers, lakes and other waters; and we also know that the specific gravity of water is much greater than that of the air. Then, why not ask how did water attain elevated positions in the atmosphere? The fall of rain, snow and hail is such a common occurrence that philosophers experience no difficulty about these phenomena from the well known property of water to evaporate, and thus acquire less specific gravity than that which atmospheric air possesses; and because rain, snow and hail are of the same nature as water, they very readily attribute the vapor of water to have undergone some transformation by which it returns again to water, and is precipitated to the earth as rain, snow and hail.

This, however, merely describes the phenomena; but does not explain them. The evaporation of water is more chemical or electrical, than mechanical. Through the influence of the sun's rays certain changes are effected in the condition of water, not like what we observe in the production of steam, for here, steam is never produced until water is raised to the boiling temperature, which is never done under the mere influence of the sun's rays; but in some mysterious manner water is evaporated with scarcely any sensible change of temperature, which indicates more of chemical than caloric actions.

We observe continuous changes affecting all telluric substances, by which numerous oxides, gases, vapors, ethers and various volatiles are produced, showing that in the ordinary operations of natural laws, these substances undergo modifications and transitions, and thus their conditions are always unsettled. We see them, as it were, in mere transitory forms; and, therefore, we have no reason to attach to them any permanent characteristics. Hence, we can well understand how transitions may transpire without our perception of them; and, in course of time, changes be produced and we remain unable to account for them.

By the common application of heat, and even without any sensible changes of temperature, metallic and other substances become vaporized. These vapors having less specific gravity than atmospheric air, rise to elevated positions above the surface of the earth, and being of different natures from the vapor of water, they do not become so easily condensed by cold and precipitated like rain; but remain in the upper regions until acted upon by chemical or electric circumstances, or, by the accumulations of affinities; then we become aware of aerolites, meteors, auroras, and other magnetic convulsions taking place in the air. In consequence of the air being surcharged so

frequently with all kinds of vapor, and because light has to pass through this atmosphere, whether it be solar or artificial, we may possibly be able to account why on the spectrum we discover such uniform characteristics in the lines. These vapors may, also, very probably, affect light itself in passing through them, and the spectrum perhaps reveals these influences more than it does the nature or composition of the bodies emitting the rays of light.

Is it well known among chemists and other physicists that iron, next to carbon, enters in the composition of bodies on the earth more than any other known substance. Iron gives the varied hues, tints and colors we observe; and blood owes its rich red color to the great quantity of iron dissolved in it. Now, when iron and carbon are so abundantly present everywhere, and vapors are so constantly rising from the earth's surface, it is not at all strange that the vapors of iron and carbon should far exceed all other vapors in the atmosphere.

The meteoric masses discovered by the Swedish Arctic expedition in Greenland, in 1870, were found by chemical analysis to contain more than eighty per centum of iron; and the huge mass of meteoric stone discovered in 1861, near Melbourne, Australia, had iron largely in excess; and other meteors were found to contain carbon in excess, such as those discovered near Upsala in 1869; those discovered at Montauban, France, in 1864; the two stones which fell at Alais, France, in 1806.

Another remarkable circumstance attending meteors is, that many of them are very soft and friable, when they first fall, as were the two stones which fell at Alais, France, in 1806; and those discovered near Cape Town in 1838; those discovered in 1868 at Ormans, France; and others. In some cases they harden *after* their fall.

These facts surely indicate that meteors form but a short time previous to their fall; hence, to my mind it is very evident that the vapors which rise from the earth undergo transformations in the higher regions of the atmosphere, in consequence of elemental, chemical and electric actions, whereby they return to their primitive conditions, which we witness in rain, snow, hail, meteors and similar phenomena.

The atmosphere, as it extends away from the surface of the earth, becomes more and more attenuated; hence, the specific gravity of the ether surrounding the earth's atmosphere, is less than that of the atmosphere, and this ether must continue to get more and more attenuated as it advances out in space, until it meets the enveloping ethers surrounding the atmospheres of other bodies, when the reverse condition exists, and these other ethers and atmospheres become less and less attenuated as they approach the surfaces of the other bodies in space. Now, in the generation of vapors on these other bodies, we can not suppose that they behave differently from those of the earth; that they rise through their less specific gravity to heights where they are in equilibrium with the atmospheres, or precipitated by elemental, chemical and electric changes to the surfaces of the bodies whence they rose. Therefore, we have no ground for supposing that meteoric masses which fall to the surface of the earth ever had any origin outside the earth. For, it is extremely incredible that masses of meteoric stone could overcome the law of specific gravity, and rise, however so great an impulsive force can reasonably be conceived.

For the NEW YORK SCHOOL JOURNAL.

Another Specimen.

By BUSY BEE.

A botanist is always delighted at finding new specimens, but the last specimen of a teacher found by my humble self was not at all pleasing. I was not looking for teachers of any variety; I had just made up my mind that that I did not wish to see a school-teacher, however grand, noble, great or perfect in an age, except one. I confess that there is one some where in the "wide, wide world" that I like—like very much. Yes, I am sure I meant like, my pen is just like my tongue—never says things just as I want to; but that's one of my crosses.

Now, to return to that teacher. It was a lady, how I do admire them, bless the dear creatures; sunshine of man's existence! some, not all, nature had made this one sweet and pretty, but somebody spoiled her. Undoubtedly it was her mother. She thought she was kind to her child.

Worse treatment she could not have bestowed, short of absolute cruelty. I found this teacher most pleasing in manner, but silly in dress, and with eyes blind to disorder,

and untidiness about her room, and careless with her clothes. By exercising a little caution, I learned that when she retired, her velvet or silk, which cost her so much hard labor, were left lying in a heap upon the floor, where they were left to be taken up and cared for by the one had charge of her room. While she was particular to have white lace around the bottom of her train, which she swept to perfection in, rents, tears and rips were left until the last minute before they were attended to. This is another specimen of those who are waiting for the coming man to relieve them from school-teaching. Maybe, if any man is about to be "distracted" he better take unto himself such a wife.

For the NEW YORK SCHOOL JOURNAL.

The Other Side.

In a recent number of the JOURNAL, are quoted some series charges against teachers, and, what is worse, they are not altogether devoid of truth. To all of them, there is no doubt another side, but I shall notice only two sentences.

A New York Commissioner says, speaking of teachers. "I have noticed but a very few that could converse well on education even." That, by the way, is not so very flippant a subject to discuss. You can find many other topics with which familiarity were sooner acquired. There is a deeper philosophy in it than average minds discover, so our young teacher, though engaged in the work of education, can not be expected to discourse very wisely on what has taxed the greatest intellects. But true it is, our teachers lack in breadth of knowledge. They are not always to blame for this. The work expected of them is sometimes so great that little time is left for reading. What with examinations, per cents, averages, etc., we are kept only too busy. I once heard a teacher complain of this. "Why," she said, "I visited a family in the country, quite in the backwoods, but they had all the latest magazines and papers, and discussed the topics of the day with great familiarity. I was ashamed of my ignorance, but I have been too busy with reports and school work in general, that I could not read."

We must read. We shall teach the better for it. And we must, too, enter a united protest against useless reports, grades, etc. There must be system, but that can be secured without loss to teacher or pupil. Reports and registers are often prepared by persons who never make them out, some mathematical author who revels in the statistics of a complicated record. It might be well for trustees to remember that records are not all of school work, else book-keepers could all be teachers.

Again it is said, "They know more about technicalities." True, for that is just what Examining Boards, usually not composed of teachers—have required of us. There is need of reform in our ranks, and if the other side will expand a little in educational thought and plan, the cause will be helped on wonderfully.

No Shams in Teaching

Theodore Thomas resigns his place at Cincinnati because he is an artist. He wanted a "plain school without fuss or show, with no parade in the management of the institution, but a great and a good school." With the question of expediency, he, as an artist, had nothing to do. He stands as the extreme type of the artist. We are not concerned now with the question of expediency but with the question of art, and in this position Mr. Thomas is undoubtedly right and is a worthy artist.

Millais, the French painter, says to the rich and vulgar Englishman who came to have him paint his portrait, and wanted to bind him down to a certain number of days for its completion or a forfeiture of five pounds for every day's delay, "You can leave my house, I would not paint your portrait for ten thousand pounds." And we say he was right.

No one can be an artist to whom his art is not its own law and no art will ever be acknowledged such by the public till this lesson has been taught by such men.

When Thomas gives up his place, salary, house and comfort for the sake of his ideal of what a musical college should be—when Millais flings metaphorically ten thousand pounds into the face of the enraged Englishman, the world says, "But what is this? There must be something these men are working for. What is this thing, to which money and position are of no importance? This Art must be, a greater thing than

we know, and an artist must have our respect though we confess we do not understand him."

Now for my application. Teaching is a fine art. Only those of us who hold the doctrine are true artists or will ever make any enduring mark on our pupils or command respect for our work. But the test of the true artist is the showing that to him the necessity contained in his art is above all other necessities and to that he must be true if he fail every where else. How about public examinations and exhibitions and percentages and statistics? How about drilling pupils on, to them, perfectly useless things in order to make a show? How about training them to read Poe's "Raven," or Woolsey's "Speech to Cromwell" before a wonder-struck audience, when we know perfectly well that they can't read at sight any page of common English without blundering so that it is no pleasure to hear them? How about handing round their writing books as proof that they are fine and correct writers, when they can't write a letter of a page that is not full of errors? How about the essays they read at the exhibitions which are supposed to contain their own thoughts expressed in their own English? How about the time spent in preparation for show which ought to be spent in honest work?

Oh! fellow teachers, if we as a profession are a butt for every one's joke—if we do not find ourselves recognized as a profession, if to be a school teacher in the eyes of the physician is to be a person ignorant of the simplest facts of physiology, whose fault is it?

Do we ourselves treat our work as an art? Do we hold ourselves firmly opposed to all sham of whatever sort, whatever the pressure may come from, and every day and all day lend our efforts to only what is best for the full and healthy mental, physical and moral good of the pupil? or do we yield to the demand for "a few more bars of music, sir," and prove to the public or the committee who ask it, that we are merely subservient tools, and that no more to us than to them is there such a thing as an Art of Teaching?

If we want others to respect our work we must respect it ourselves. It is of no use for us to cry "Teaching is an art," when our every act shows that it is to us no art and that we will do whatever is required of us in order to retain our places.

If we do not hold the place we ought to hold as a profession it is our own fault—the fault of our time-serving, and the "few more bars of music" which we complacently order for the sake of the show.

Honesty pure and simple, not because it is the best policy, but because our art demands it; fidelity to the principles of that art; a flinging away of all shame—a refusal to do any work which is for show—these we must have as a profession and then we shall not need to command respect for we shall find ourselves surrounded by it.—Miss ANNA C. BRACKETT, in the *American Journal of Education*.

Personality in the Teacher.

The following article from the *Sunday School Times* has so many points that apply to the general teacher that we invite careful attention to it:

What makes an eminently successful Sunday-school teacher? Or, to vary the question slightly, What qualifications are necessary in order to insure eminent success in this special department of teaching? First, good natural capacities; not necessarily rare intellectual gifts, but certainly at least average understanding and good common sense. Secondly, such a measure of education and general knowledge as prepares one, with the proper and available helps, thoroughly to master the lessons to be studied. Thirdly, such an appreciation of the importance of the work as will secure a careful study of the lessons, and faithful spiritual preparation to meet the classes. Fourthly, tact in asking questions and drawing out the knowledge of the class, together with skill in presenting and illustrating the truth in hand. And, fifthly,—and combined with all the rest,—the sincere desire for the spiritual welfare of all the pupils, which leads to earnest prayer and effort that they may speedily be led to Christ, and may begin to develop religious character and life.

Something like this, for substance, would probably be the answer generally given to the question with which we started. Without these qualifications, the place of pupil, rather than that of teacher, should be sought by one entering the Sunday-school. Yet one may have all these, and still not attain success in any marked degree. There are

certain qualities, wholly personal and independent of, or at least over and above the qualifications we have named, which insure the teacher an influence that is in the highest degree effective. These qualities give to one who possesses them that indefinable something which we recognize as the distinctive personality, the peculiar personal power of the individual over others. This, in particular cases, is so great as to seem almost magical, or like a special supernatural gift; and as manifested in its effects, it is often regarded with astonishment. We recall, as an instance, a lady now in the maturity of womanhood, who, from the time when she was six or seven years old, drew to her as if by fascination all the children of her own age and younger with whom she came in personal contact; and from that time to the present, she cannot have children about her without seeming so to charm them as to make them completely happy, and to enable her almost literally to do with them what she will. Such cases are by no means very uncommon; and in lower degrees the same kind of power to interest and influence children is quite frequently observed. This sort of personal magnetism is not, however, manifested in connection with the young alone. There are men and women, in all spheres of life, who have the same peculiar power over their associates; attracting and moving them not by any marked intellectual superiority or greater general knowledge, but by a power too subtle to be analyzed or intelligibly described in words.

Is this peculiar power, then, wholly a natural endowment? Or is it something that may be and ought to be acquired, like other valuable accomplishments? We believe it is partly both. There can be no reasonable doubt that, in the natural temperament of some persons, there is a specially happy constitution or adjustment of the sensibilities, which renders the habits of feeling and the manners that are pleasing to others comparatively easy. It is equally beyond question, we are persuaded, that the cultivation of the qualities to which such a temperament predisposes is quite a practicable thing. In this, as in other kinds of self-culture, there will of course be different degrees of success; but this should not hinder each from doing the best possible in his own individual case. Why should not a Sunday-school teacher do his utmost to acquire the personal qualities essential to success in the great and responsible work of fashioning into the image of God spirits that are to outlive the visible world, if the painter or the sculptor is willing to train himself long and patiently to the skillful use of the pencil or the chisel, that he may send his name to coming generations identified with the canvas or the marble?

We once received into our family for a day or two a lady—a great favorite with the public—who was to sing, on a succeeding evening, the principal solos in a concert of the highest order. Besides most careful attention to diet and all that concerned her health, she spent hours alone in her room, rehearsing over and over the passages to be sung, or the more difficult portions of them, that she might be absolutely sure to reach the utmost limit of her capacity. With equal pains, too, it was evident she had studied and acquired the felicities of manner and expression which won the favor of those who listened to her, until they had become to her as if purely natural gifts. Yet does not many a teacher in the Sunday-school go there to work on his imperishable materials and for results of infinite moment, with scarcely a thought of what is involved in this; and with no careful preparation in the way of cultivating the sympathetic and kindly spirit, the easy cordiality of manners, and the various other qualities which give personal influence and power? Too plainly this seems to show that the real magnitude of the Christian teacher's work is as yet but very partially understood.

Of course it is only genuine qualities that give the peculiar personal power of which we speak. In the Sunday-school, as every where else, it is character—the character in which the attractive elements or real goodness is exhibited—that commands respect, admiration, love. It is when, drawn at first by this indefinable attraction, the pupils recognize, on further acquaintance, the higher qualities of character,—the spirit of self-sacrifice, the disinterestedness, the sweetness of temper, the truthfulness, the patience, the Christ-like tenderness and love, which give beauty and completeness to the best type of the Christian man or woman,—that the teacher takes in any class the place of highest influence and power. To such a teacher the hearts of pupils, with very rare exceptions, may be expected to open, as roses open to the morning sun, to take in the genial and life-giving influences that fall so kindly

on them; and he may confidently hope to find them ere long opening lovingly to let the Savior in.

To teacher and pupil alike, therefore, the Sunday-school work may be and should be made an effective and delightful means of spiritual culture. It should stimulate the teacher to subject himself to constant self-discipline, as himself in a process of training in the school of Christ, that he may exhibit the beauty and possess the influence which belong to the character which most truly represents that of the divine Master. No one can faithfully strive to make himself such a teacher as he ought to be, without making himself steadily a holier and stronger Christian man; and certainly no class can enjoy the instructions of such a teacher as we have described, without either receiving the highest benefit, or being left wholly without excuse for the failure to receive it.

The Desert of Sahara.

A correspondent of the *Chicago Times*, writing from the oasis of Taflet, in the Sahara, April 7, says that so far from being a desolate plain of moving sand, as popularly believed, the Sahara is a cultivated country, fruitful as the Garden of Eden. Like our "great American desert," it has been greatly belied. El Sahr, as the Arabs pronounce it, is indeed a vast archipelago of oases, offering an animated group of towns and villages. A large belt of fruit trees surrounds each of these villages, and the palm, the fig, the date, apricots, pomegranates, and vines abound in the utmost profusion. Ascending the Atlas Mountains by a gradual slope to the region of high tablelands, we come to the land of the Mozabites, or Ben Mozab, and then comes a gradual descent for three hundred miles to the vast stretch of treeless country known as the great desert.

The rivers have an inclination of about one foot in four hundred. Many of the streams are dry, except after rains, when they deluge the country. Gun-shots are fired as soon as the torrents appear; all objects are removed, and soon, with a terrible noise, the flood rolls on. The Saharian city stands as if by magic on the banks of the waters which rise to the tufts of the palm trees; but a few days only elapse ere all disappears, leaving the district rich and fruitful. The inhabitants are not a migratory people, and, unlike the tent-dwellers of the northern slope, live in substantial houses with thatched roofs and ceiling of cane laid upon joists of alve wood. These houses generally consists of but one room, and have no furniture except mats on the floor and upon the walls for three or four feet high. Beds are sometimes found, but no one thinks of sleeping on them. The walls are white-washed and inscribed with verses from the Koran. The inhabitants are made up of genuine Arabs and Berbers, or Kabyles, as the French call them. Jews are found in every oasis, and all very prosperous and influential, doing much of the trading and making up of the great caravans.

Garfield as a Teacher.

Rev. J. L. Darsie says: "I attended school at the Western Reserve Eclectic Institute when Garfield was principal, and I recall vividly his method of teaching. He took very kindly to me, and assisted me in various ways, because I was poor and was janitor of the buildings, and swept them out in the morning and built the fires, as he had done only six years before, when he was a pupil at the same school. He was full of animal spirits, and he used to run out on the green almost every day and play cricket with us. He was a tall, strong man, but dreadfully awkward. Every now and then he would get a hit on the nose, and he muffled his ball and lost his hat as a regular thing. He was left-handed, too, and that made him seem all the clumsier. But he was most powerful and very quick, and it was easy for us to understand how it was that he had acquired the reputation of whipping all the other mule-drivers on the canal, and of making himself the hero of that thoroughfare when he followed its tow-path ten years earlier.

No matter how old the pupils were, Garfield always called us by our first names, and kept himself on the most familiar terms with all. He played with us, freely scuffled with us sometimes, walked with us in walking to and fro, and we treated him out of the class-room just about as we did one another. Yet he was a most strict disciplinarian, and enforced the rules like a martinet. He combined an affectionate and confiding manner with respect for order in a most successful manner. If he wanted to speak to a

pupil, either for reproof or approbation, he would generally manage to get one arm around him and draw him close up to him. He had a peculiar way of shaking hands, too, giving a twist to your arm and drawing you right up to him. This sympathetic manner has helped him to advancement. When I was janitor he used sometimes to stop me and ask my opinion about this and that, as if seriously advising with me. I can see now that my opinion could not have been of any value, and that he probably asked me partly to increase my self-respect, and partly to show me that he felt an interest in me. I certainly was his friend all the firmer for it.

"I remember once asking him what was the best way to pursue a certain study, and he said: 'Use several text-books. Get the views of different authors as you advance. In that way you can plough a broader furrow. I always study in that way.' He tried hard to teach us to observe carefully and accurately. He broke out one day in the midst of a lesson with 'Henry, how many posts are there under the building down stairs?' Henry expressed his opinion, and question went around the class, hardly one getting it right. Then it was: 'How many boot-scrapers are there at the door?' 'How many windows in the building?' 'How many trees in the field?' What were the colors of different rooms and peculiarities of any familiar objects. He was the keenest observer I ever saw. I think he noticed and numbered every button on our coats. A friend of mine was walking with him through Cleveland one day when Garfield stopped and darted down a cellarway, asking his companion to follow, and briefly pausing to explain himself. The sign, 'saws and files' was over the doors, and in the depths was heard a regular clicking sound, 'I think this fellow is cutting files, said he, 'and I have never seen a file cut.' Down they went, and, sure enough, there was a man recutting an old file, and they stayed ten minutes and found all about the process. Garfield would never go by anything without understanding it."

"Mr. Garfield was very fond of lecturing to the school. He spoke two or three times a week, on all manner of topics, generally scientific, though sometimes literary or historical. He spoke with great freedom, never writing out what he had to say, and I now think that his lectures were a rapid compilation of his current reading, and that he threw it into this form partly for the purpose of impressing it on his own mind. His facility of speech was learned when he was a pupil there. The societies had a rule that every student should take his stand on the platform and speak for five minutes on any topic suggested at the moment by the audience. It was a very trying ordeal. Garfield broke down badly the two first times he tried to speak, but persisted, and was at last, when he went to Williams, one of the best of the five-minute speakers. When he returned as principal his readiness was striking and remarkable.

"At the time I was at school at Hiram, Principal Garfield was a great reader, not omnivorous, but methodical and in certain lines. He was the most industrious man I ever knew or heard of. At one time he delivered lectures on geology, held public debates on spiritualism, preached on Sunday, conducted the recitations of five or six classes every day, attended to all the financial affairs of the school, was an active member of the Legislature, and studied law to be admitted to the bar. He has often said that he never could have performed this labor if it had not been for the assistance of two gifted and earnest women—Mrs. Garfield herself, his early schoolmate, who had followed her husband in his studies, and Miss Almada A. Booth, a member of the faculty. The latter was a graduate of Oberlin, and had been a teacher of young Garfield when he was a pupil, and now that he had returned as head of the faculty, she continued to serve him in a sort of motherly way as tutor and guide. When Garfield had speeches to make in the Legislature on the stump, or lectures to deliver, these two ladies ransacked the library by day, and collected facts and marked books for his digestion and used in the preparation of the discourses at night. Mr. Garfield always acknowledged his great obligation to Miss Almada Booth, and at her death, recently, he delivered one of the most touching and eloquent addresses of his life.

An Irishman says he can see no earthly reason why women should not be allowed to become medical men.

THE NEW YORK SCHOOL JOURNAL comes to us this week fresh and overflowing. Every teacher ought to read it.—*Parkville Courier.*

Indian Students.

On the 16th instant a party twenty-five of the Indian students boys and girls, from the Hampton (Virginia) Normal and Agriculture School, were received by the friends of education at the Y. M. C. A. rooms. There were seventeen boys and eight girls, from the Mandan, Sioux (Cheyenne), Arickaree, Unkapa-Sioux and Gros Ventre tribes. They are very bright and intelligent, and speak English well. The children sang, in the Indian tongue "Nearer, my God, to Thee."

Mr. J. C. Robbins, a graduate and teacher at Hampton, a young fine-appearing colored man, made an address, showing the rapid progress made by the Indian boys and maidens in every good way, in education, in adaptation to work on the farm, in tin and wood and iron work, in fraternizing with the whites and with their fellow colored students, in adopting the dress and manners and customs of the higher life in which they have entered.

The Indian children have had a ride on the Elevated Road, and visited the Post Office, Trinity Church, and many other places, they will be distributed among the farmers in Stockbridge, Mass., for the summer, returning to the institute in the fall.

It is a common complaint among half-educated people, and it is re-echoed by some theoretical educators, that our common schools teach too many things. In a certain sense this is true; but in a deeper sense it is the reverse of the truth. Our common schools might be raised to a higher level than they now occupy, and yet teach nothing but speaking, reading, writing and arithmetic. It is not necessary to teach spelling as a separate art. He who has been properly taught to read will be able to spell all that he has read, and more is useless. When we teach a person to read, we teach him the art of getting knowledge from a printed book. He has not learned to read—he may have learned the names of words—till he has acquired this art. But an art is acquired by practice. He must, therefore, practice the art of acquiring knowledge from a printed book. I do not mean the art of memorizing and reciting words, which is quite a different thing. Now on what subjects shall he practice this art? Can there be anything better adapted to the purpose, more useful, or more interesting than books containing information about this world in which we live (geography); about the people who have lived in it (history); about our own bodies (physiology); about right and wrong (morals)? Such readings are not out of place in elementary schools; if children are to be taught to read at all, that is, to acquire knowledge out of printed books, they should be taught to read something worth acquiring and worth retaining. The art of reading, in this sense, cannot be attained without much practice on real subjects. Between ordinary school reading and real reading there is as much difference as there is between a dress parade and a hard fought battle. Again, every one acknowledges that children should be taught to speak correctly. But "speaking correctly" is another phrase for the art called "grammar," which, also, can only be acquired by practice. Writing is taught for the purpose of enabling us to express our thoughts on paper. If we stop short of this, we merely climb a staircase without entering the room. Writing so as to express thoughts is another art—composition—which, like the rest, can only be acquired by practice. Not to speak of arithmetic, about which, curiously enough, there is no dispute, we see that all, and more than our common schools teach, can be embraced in the traditional three "R's." How then can it be said, in any sense, that the schools teach too much? They (I am speaking of the least progressive among them) teach too much spelling, too much naming of words, too much memorizing of words, too many technical definitions in grammar, too many unrelated and unretained facts in geography and history, too many intricate, perplexing and comparatively useless processes in arithmetic. It would be better far to have the three "R's" taught in the way I have suggested by a zealous, intelligent, sympathetic teacher, who would bring his mind into contact with the minds of his pupils, and develop thereby the "living fire of thought," than a whole cyclopaedia taught by a stupid book-worm or a rigid pedagogue of the lesson-bearing school. The instruction of our common schools should enable one who has attended them from his sixth to his sixteenth year to understand what he reads; to form an independent judgment on questions which he understands; to express his thoughts correctly, both in speaking and writing, on subjects within range of his knowledge, and to refrain from expressing or forming an opinion on matters about which he has not sufficient information.—M. A. NEWELL, Supt. of Schools, Maryland.

FOR THE HOME.

Cousin Alice in Boston.

Instead of the turbulent streets of New York, Cousin Alice, the friend of the scholars, is walking through the more quiet ones of Boston, "the Hub," as it is familiarly called. If the COMPANION readers were asked what they would first visit upon arriving in this city, I know many would exclaim, "Bunker Hill Monument!" and that was the first place Cousin Alice started out to see, taking the horse-cars, for the monument is in Charleston, on the other side of the Charles River, where the British crossed to attack the Americans, on the Hill that became famous from the victory then won by our countrymen. On the top of the Hill, at the corners, stone tablets are placed to mark the redoubt. The monument is of smooth granite and 220 feet high; stairs lead to the top, and one can see miles and miles away.

Where next but to Cambridge, the home of Longfellow? Again the cars take us from Boston across the River Charles—whose name reminded the poet

"Of three friends, all true and tried."

Do you know who the three Charleses were? And there is another poem which almost every scholar knows, beginning

"I stood on the bridge at midnight,
As the clock was striking the hour,
And the moon rose o'er the city,
Behind the old church tower."

This bridge spans the Charles River, and several clocks can be seen from it. How beautifully Longfellow tells the thoughts that came to him as he stood on the bridge that night. This side of the Poet's home is Harvard, the oldest college in the United States, for it was founded in 1638; just before the Declaration of Independence was signed (of course you know when that was) George Washington was constituted Doctor of Laws, Harvard's highest honor. There are a number of buildings for the use of the thousand, or near that number of students—one, Memorial Hall, was erected in memory of the students who were killed while fighting for their country. Walking on and up Brattle street, we remember the "spreading chestnut tree" under which the village smithy once stood. A year ago, on the seventy-second birthday of Longfellow, the children of Cambridge presented him with an arm-chair made from the wood of this tree, and the Poet responded,

"Well I remember it in all its prime,
When in the summer time,
The affluent foliage of its branches made
A cavern of cool shade.
"And now some fragments of its branches bare,
Shaped as a stately chair
Have by my hearthstone found a home at last,
And whisper of the Poet."

And only lately these Cambridge children, 800 of them, signed their names in a book and presented it to Mr. Longfellow.

But now we come to the house where Longfellow passes his quiet days, which Washington once occupied during troubled times:

"Somewhat back from the village street
Stands the old-fashioned country-seat,
Across its antique porch
Tall poplar trees their shadows throw."

It is a roomy house with spacious piazzas shaded on either side by an immense poplar tree, and surrounded by pleasant grounds; a wide plank walk leads to the front door, through which the eyes of Cousin Alice cannot penetrate.

Back again to the city, and off to the West End, a place of handsome houses, and fine buildings. The Museum of Fine Arts interested Cousin Alice; it is filled with casts of Greek sculpture which fill six rooms—paintings, modern and ancient, curiosities, embroideries, etc.

Then there is the Common, which is dear to the hearts of Bostonians. Do you remember, scholars, about the boys who appealed to Gen. Gage, one hundred years ago, to protect them from the Boston soldiers who would not let them coast? Well, this is the very Common—a large strip of ground laid out in walks, and enclosed by a low railing. At one end is a large statue dedicated to the soldiers and sailors who fought in the Revolution. Near the Common is the State Capitol with its gilded dome, Beacon street, on which Oliver Wendell Holmes lives, the Old South Church built in 1670, and here is a market!—why! it is Faneuil Hall, the "cradle of Liberty." Alas! butter, cheese, and pork are dealt out where once Hancock, Otis and Adams poured forth eloquent words.

"The best discipline is that which is secured with the least show of authority and with the smallest amount of friction, but there can be no well-regulated school without good order and the prompt obedience of pupils."

FRESHMAN (in Algebra), while the professor's back is turned (in a whisper): "Say, how do you get that quantity out from under the radical?" Another freshman, (consoling), "Rub it out."

Cats That I Have Known.

I have been acquainted with a good many cats in my time, and think of some of them now as people do of human friends that have lived and died. One of the most remarkable cats I ever saw was a Maltese that was called Bunkum. She was a good mouser, and besides was a companion for all the house. I should say she knew about fifty times as much as an ordinary cat. She had regular habits; one was to sit at the table at meal time, though she never ate anything. This came about in this way. One of the family was at one time obliged to watch some machinery in the mill while the others ate. Bunkum seeing the vacant seat, jumped up into it and appeared to derive so much satisfaction that we furnished her with a chair afterward.

It was no uncommon thing for visitors to ask after Bunkum, for she was known far and wide. She walked down the village street in perfect security; no dogs troubled her, and the boys ran to caress her. Every day she took a nap on the mat just inside the door, as soon as the confusion of dinner was over. If put in a bed, or in a chair, she returned to the mat. Nor would she permit anyone to hold her in his lap; she made her way quickly to the floor; but if there was a vacant chair, she would sit up in it. One day she ran upon a wood-pile and a heavy log fell and crushed her; as soon as released she crawled into the house in great pain, laid down on the mat, and licked my mother's hand and expired. We mourned for her; our hearts were sad.

Then there was a long succession of ordinary cats of no particular merit. One morning a kitten was seen in one of the evergreen trees in the yard. She was brought in and fed; as she grew up she proved to be a wonderful animal. She was named Rondo. She kept the house clear of rats, but beside that she had time to practice a great many curious arts that greatly endeared her to us. She would go out in the fields with us like a dog, hunting among the bushes for mice and birds. She took great delight in these rambles and would ride in a wagon or on a hay-cart. She seemed to understand matters and things as well as any dog. She would jump out of the wagon on arriving at the house, and hurry into the kitchen and show by her mewling that she wanted something to eat. She was afraid of no animal; the cows, horses and chickens knew her and treated her kindly. Poor Rondo fell a prey to that fatal disease—fits.

Then there was again a succession of ordinary cats, and I remember no peculiarity about them. But this was not to go on forever. There was a brood of kittens found in the wood-house and one was selected on account of his phenological development. He had an enormous forehead and that saved him, for all the others were drowned. We named this one Gib and he began a remarkable career—for a cat. He was the ruler of the premises; no cats or dogs must enter the yard. He learned of himself to open doors having the old-fashioned latch, but he never shut them behind him. He was scrupulously honest, never taking things from a table, no matter how hungry. The interest he felt in every portion of the family was shown by his noticing the absence of one of the children; he looked through the rooms and in her bed several times, and seemed quite unhappy and uneasy as though unable to account for it. When she returned he showed his joy by running around in a wild tumultuous way, and then settled down into his usual mode of life again. Gib was shot by a neighbor for trespassing at night. We regretted the loss of him for he was a faithful friend. He never troubled himself about rats and mice; he seemed to have larger matters to attend to.

THE SIGNATURE.—You know that when a law has been made it is signed by the King, Emperor, President, or Governor. Well, years ago the kings did not know how to sign their names. [Henry I of England (in the year 1100) was called *Beau Clerk*—or fine scholar, because he could write his name. Kings usually had some of the monks sign the charters. Gibbon tells us, Theodore, who was King of the [Ostrogoths in Italy, had a gold plate made, in which the first few letters of his name were cut in Greek characters; when a paper was to be signed he laid the plate on the paper and marked through the openings with his pen. This was the only way he signed it. Some Turkish sultans used to dip their hands in a bowl of ink and press that on the paper. That was an ugly way surely. The common way was to have a seal-ring and press it into wax at the bottom of the letter; after persons learned how to write their names they still used the seal—hence the expression, "witness my hand and seal;" the seal is less and less used. Persons who had no signet ring used some peculiar character—in these days only used by the illiterate and called a mark—it is but a cross.

HORSFORD'S ACID PHOSPHATE

IN CONSUMPTION, DYSPEPSIA, ETC.

I have used Horsford's Acid Phosphate in several cases of dyspepsia to my general satisfaction; and also have tried it in two consumption cases where I think it has done them a service.

MIDDLEBURY, O.

J. H. FORESTER, M.D.

TOBACCO.—The German government has at last found out that the everlasting smoking by its people is highly injurious. Some towns have forbidden all boys under sixteen to smoke in the streets, the penalty being fine and imprisonment. In Belgium the government is becoming alarmed, and a commission has been appointed which reports against its use. The color blindness as it is called (an inability to distinguish colors), which has been greatly on the increase for several years, is believed to be caused by tobacco. Not long since a railway engineer paid no attention to a red lamp raised to warn his train. On examination it was found that he could not distinguish colors, and that this was caused by his excessive use of tobacco. He was discharged, and now all employees are tested before they are employed.

WATKINS GLEN.—*Watkins Express*, says: Those who love the most charming of American Scenery, can not fail to find an unfailing source of pleasure in a visit to this wonderful region, with its matchless lake, its magnificent glen, and numberless excursions on land and water, by rail, carriage or boat. The Glen Mountain House, which is undergoing a thorough renovation, will be ready for the reception of guests on Tuesday, June 1st; and the present management, being amply able to make it all that can be desired in a first class Summer Resort, will spare no pains to render it as pleasant as possible for all who visit it, being determined to place it foremost in favor with the traveling public. We understand that arrangements are being made with all the leading lines of travel to reduce the rates of fare to the locality lower than ever before, especially from the principal cities, so that all who desire to visit the famous glen can do so at the most reasonable rates; while their excursions hither can include trips to Niagara Falls, the Thousands Islands, Saratoga, and such an array of attractions as stand unrivaled by any other land.

ENGLAND.—The Tory ministry in England has been obliged to step out of power. It is the same as it would be in this country if the Republicans should lose the Presidency. There has been an election held and new members of Parliament were chosen, and there were more of the Liberals than of the Tories or Conservatives. The Cabinet or chief officers (who really run the government) must now be of the Liberal party, so that Lord Beaconsfield must retire and Mr. Gladstone take his place. The latter is not liked by Queen Victoria, but she is obliged to invite those her people want, no matter if she does not like them. Earl Granville is to be Secretary of State, Marquis of Hartington Secretary for India, Mr. H. C. E. Childers Secretary of War. A new policy will be devised by these men, one that will be more popular than that of Lord Beaconsfield, who has run the country in debt to carry on the Afghan and African wars.

"The Beautiful Hudson."

These are the words of thousands of travelers. No river ever before received such praise. And it is well deserved; from its mouth to Albany it is a succession of beautiful scenes. No one can see these to such a good advantage as those who travel on the steamboats. The "Drew," the "St. John," the "Dean Richmond" as well-known to travelers—they are household words. The comforts and elegance of these boats during this season have been greatly enhanced. All have completely renovated, supplied with new furniture, splendid mirrors, etc., and present accommodations for the traveler that equal any first-class hotel. A trip to Albany by these boats is a pleasure. Every precaution is made to insure safety and speed. Travelers will see no sights they will remember longer than those afforded by a moonlight night on the Hudson by the People's Line of Steamers—water and sky, the rush of the waves, the mountains, the sailing vessels—all conspire to make it a part of the mind—not to be forgotten.

A Few Words.

We send out every week some extra copies of the JOURNAL, to those who are not subscribers. We beg to say a few words to them. (1) Your capital is not so much knowledge as ideas. You need the best thoughts of those who are in the same line of work as yourself; you ought to have them. Your pupils would feel the effect of them. (2) A man might get along ten years ago without an educational journal; but he could not be much of a teacher. (3) Summon up courage to try the JOURNAL. You will not regret it.

THE NEW YORK SCHOOL JOURNAL is a regular and welcome visitor. Its educational basis is good, its general make-up fine. It merits the attention of school men.—*Central Star*.

BOOK DEPARTMENT.

NEW BOOKS.

TEACHER'S ASSISTANT to accompany White's Industrial Drawing, Primary Course. New York and Chicago: Ivison, Blakeman, Taylor & Co.

This little book offers practical suggestions for teaching drawing to young pupils and explain the general plan and illustrate the figures in White's Primary Drawing Books.

RUDDER GRANGE. By Frank R. Stockton. New York: Charles Scribner's & Sons.

This book was so cordially received last spring, that a new edition was launched this year. If the title sounds ambiguous—it might mean to the uninitiated a treatise on farming, or a novel of country life,—we hasten to explain that it is a collection of funny stories, each complete in itself, but connected with the others, they ran through Scribner's, provoking much merriment. The people in it described began their married life on a canal boat, that was high and dry on land. Their troubles in moving, then boarder, then flower garden on deck, Pomona the servant girl, and their being washed away by the tide, are all told in a way that strongly affects one's risibles.

MAGAZINES.

The stately covers of the June *Popular Science Monthly* conceal a valuable set of articles. The first by Paul R. Shipman, is a plea for the "Classics that Educate Us," and he earnestly desires that the dead languages be done away with in the school curriculum and the mother-tongue reign until the education is finished. Dr. Benj. W. Richardson's paper on "Dress in Relation to Health," is reprinted from the *Gentleman's Magazine*.

PAMPHLETS.

The Catalogue of the Cincinnati College of Music states that the college is divided into two departments. The Academic Department is intended for those who desire to become professional musicians and for amateurs who intend to graduate. Students are expected to remain at least a year, and to follow a definite course of instruction. The number of pupils in this department is fifty-three, of whom forty are girls or women. Instruction in the orchestra and ensemble playing is confined to the Academic school. The larger department, and the principal source of income, is the General Music School, which supplies either general or special instruction, to all comers, for a period of one quarter or more as they may choose, and exacts neither preliminary knowledge nor any precise aim. It "gives to many thousands of persons who have neither the means nor time for graduation a certain amount of the best kind of musical instruction at low prices. The number of pupils is about 500. The fall term begins Sept. 20.

Charlemagne's Table-Cloth.

Aix-la-Chapelle was one of the favorite residences of Charlemagne. There were often assembled the lords and ladies of his court, with his own family, which consisted of several sons and one beautiful daughter. He was the most intelligent and powerful monarch of his time; his dominions were more extensive than those of the Roman Emperors had ever been. It is more than a thousand years since his death, yet his fame will endure to the end of time.

One day, after a grand entertainment had taken place in the palace, the guests were amused to see a page enter, and, on bended knee, present to his royal master a salver upon which was carefully folded a soiled

white table-cloth. Charlemagne, not in the least surprised, threw it into a fire. All eyes were fixed on the fabric, which did not smoke nor blaze, but only assumed a red-hot appearance. A few moments passed, and the monarch raised it from the furnace, unharmed and white as snow.

"A miracle! a miracle!" they all exclaimed.

"No, good friends," said the Emperor: "this cloth is woven of a substance which fire purifies, but cannot destroy. It was known to the Greeks who named it asbestos, meaning unchanged by fire. We read, also, that the marvelous cloth was used to wrap the dead before placing them on the funeral pile, that their ashes might be gathered separated from those of the wood."

Thus spoke the Emperor for the instruction of his guests, and while he did not quite partake of the wild fancies of the Southern nations, it is not probable that he had a clear idea of the real structure of this mysterious substance. As time advanced, it was fully understood; and now that it has become of practical use, we cannot glance at a newspaper without seeing the advertisement, "Asbestos Materials."

Asbestos is a fibrous variety of a dark-colored rock resembling iron-ore. This is known by the name of hornblende.

We cannot understand how one of the toughest stones can be transformed into a substance as soft, flexible and white as floss silk; neither can we comprehend how the sparkling diamond is produced from charcoal. Yet we must accept these facts and try to learn all about them.

When the hard rock took this beautiful form, it was called by the Greeks amianthus, meaning undefiled, in reference to the ease of cleansing it by fire. This name is now used to distinguish it from the coarser and more impure variety known as asbestos. It occurs in narrow seams in the rock, and is occasionally found in fibres two-thirds of a yard long. These have a rich satin luster, and the slender filaments can easily be separated one from the other. The silk-like appearance of amianthus gave to some ingenious ladies the thought of carding, spinning and weaving it into cloth of different degrees of fineness. Purse, gloves, caps, handkerchiefs and napkins were made of it, and sometimes articles were knitted from the soft, exquisite thread. The inhabitants of the Pyrenees wore girdles of this substance, mingled with silver, which they estimated not only for their beauty, but for some mysterious charm they were thought to possess.

When Napoleon went to battle, he wore a shirt woven of amianthus, which was easily cleansed by throwing it into the fire. In France and Bohemia fireman's clothes and gloves for handling hot iron were made from it. The Russians have also attempted the manufacture of incombustible paper.

Asbestos besides being of a coarser texture than amianthus, differs from it in color; the latter is a creamy white, while the former is brown, green, and grayish white. It sometimes occurs in thin interlaced rocks, and feels something like kid; it is then known as mountain leather: when in thicker masses, it is called mountain cork, reterring to its elasticity. It is also found very hard and compact, and then receives the name of ligniform asbestos, from its resemblance to petrified wood.

Asbestos is found in many parts of Europe and various localities in the United States—Staten Island, N. Y., especially yielding large quantities. It is now mined and transported to factories, where it is assorted, cleaned and prepared for the various purposes for which it is used. It is made into

paints of different colors, which are used to protect surfaces exposed to heat or water. Steam-pipes and boilers are covered with some preparation of it that prevents the escape of steam; it is also very valuable as packing in the joints of machinery and is extensively used in the manufacture of fire-proof roofing and flooring.

SUPERIOR intelligence brought to bear on any particular industry often brings improvements without a special technical training in the industry itself. Many of our greatest discoveries in the arts have been made by outsiders. It is so with philosophy, and with the sciences. Philosophers, poets and discoverers more frequently spring from the people than from any class of professed thinkers or savants. Peter was a fisherman and Paul a tent maker. Plato was a merchant, Socrates a sculptor, Aristotle a druggist, Shakespeare probably a butcher, Milton a scrivener, Spinoza a grinder of lenses. In science it is the same. Day and Brewster were schoolmasters, Davy a druggist, Faraday a bookbinder, Wheatstone a musical instrument maker. Great industrial inventions, in like manner, often arise by a bright intelligence being reflected upon the art from the outside. Stephenson, the founder of railways, was a collier; Arkwright, the inventor of the water twist, was a barber; Cartwright, inventor of the power loom, was a parson; Harrison, the machinist, was a carpenter; Watt, the improver of the steam engine, was a philosophical instrument maker; and Bell, who has given to us the telephone, was a teacher of deaf mutes. For the advancement of mankind, general intelligence and fresh observation are more required than a narrow technical training.—*LYON PLAYFAIR in International Review.*

Water is Free.

That's so, but in most patent medicines you pay for it at the rate of a dollar a pint. Kidney-Wort is a dry compound and one package is enough to make six quarts of medicine without addition of any poisonous liquors. It is nature's remedy for Kidney-Diseases, Liver complaint and Piles, for it is both diuretic and cathartic, tonic and healing. Get it to-day.

It is one characteristic of genius to do great things with little things.

Talent is power; tact is skill. Talent makes a man respectable; tact makes him respected. Talent convinces; tact converts. Talent commands; tact is obeyed. Talent is something; tact everything.

A swimmer becomes strong to stem the tide only by frequently breasting the big wave. If you practise always in shallow water, your heart will assuredly fail in the hour of high flood.—J. STUART BLACKIE.

In general, pride is at the bottom of all great mistakes. All the other passions do occasional good, but whenever pride puts in its word, everything goes wrong, and what might be desirable to do quietly and innocently, it is morally dangerous to do proudly.—*Ruskin.*

Haunted Me.

A Workingman says: "Debt, poverty and suffering haunted me for years, caused by a sick family and large bills for doctoring, which did no good. I was completely discouraged, until one year ago, by the advice of my pastor, I procured Hop Bitters and commenced their use, and in one month we were all well, and none of us have been sick a day since; and I want to say to all poor men, you can keep your families well a year with Hop Bitters for less than one doctor's visit will cost."—*Christian Advocate.*

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It was a rainy morning.

Farmer A. Good morning. It's a fine day for the race.

Farmer B. What race?

Farmer A. The human race.

Farmer B. Thought this was a rich joke, and laughed heartily. Soon he met a neighbor, when he determined to repeat it. This was the result.

Farmer B. Good morning. 'Tis a fine day for the trot.

Farmer C. What trot?

Farmer B. The human trot.

To this day, farmer B., cannot understand why his neighbor looked astonished, and did not see the joke.

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